AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An infrared (IR) lens comprising:

a first surface; and

a second surface,

wherein the IR lens is a moldable IR transmissive material and one of the first surface and the second surface includes a kinoform superimposed on an aspheric surface, and

wherein the one surface with the kinoform superimposed on the aspherical surface is defined by:

$$Z(Y) = \frac{CY^2}{1+\sqrt{1-C^2(k+1)Y^2}} + DY^4 + EY^6 + FY^8 + GY^{10} + \frac{(\lambda L_i - (H_2Y^2 + H_4Y^4 + H_6Y^6 + H_8Y^8 + H_{10}Y^{10}))}{(N_\lambda - 1)}$$

~~where C = 1/R, R= radius of curvature, k = conic coefficient, D, E, F, and G are aspheric coefficients, λ = a wavelength of interest, L_i = 1, 2, 3, 4,..., i, N = diffractive index for λ, and H_2, H_4, H_6, H_8, and H_{10} are coefficients of the kinoform, Y = a radial coordinate of the one surface~~.

2. (Canceled)

3. (Previously Presented) The IR lens of claim 1, wherein the one surface with the kinoform superimposed on the aspheric surface is formed directly in a molding operation.

4. (Original) The IR lens of claim 1, wherein the moldable IR transmissive material is a chalcogenide glass.

5. (Original) The IR lens of claim 1, wherein the moldable IR transmissive material is an arsenic selenide glass.

6. (Original) The IR lens of claim 1, wherein the lens is manufactured as a unitary structure in a molding operation.

7. (Currently Amended) An infrared (IR) lens comprising:

a first surface; and

a second surface,

wherein the IR lens is made from a moldable IR transmissive material and wherein one of the first surface and the second surface includes a kinoform superimposed on an aspheric surface, the one first surface or second surface molded from the moldable IR transmissive material, and

wherein the one first surface or one second surface with the kinoform superimposed on the aspherical surface is defined by:

$$Z(Y) = \frac{CY^2}{1+\sqrt{1-C^2(k+1)Y^2}} + DY^4 + EY^6 + FY^8 + GY^{10} + \frac{(\lambda L_i - (H_2Y^2 + H_4Y^4 + H_6Y^6 + H_8Y^8 + H_{10}Y^{10}))}{(N_\lambda - 1)}$$

~~where C = 1/R, R= radius of curvature, k = conic coefficient, D, E, F, and G are aspheric coefficients, λ = a wavelength of interest, L_i = 1, 2, 3, 4,..., i,N = diffractive index for , and H_2, H_4, H_6, H_8, and H_{10} are coefficients of the kinoform, Y = a radial coordinate of the one surface~~.

Claims 8-12 (Canceled)

13. (Currently Amended) An infrared (IR) lens comprising:

a first aspherical surface: and

a second surface,

wherein the first aspherical surface is superimposed with a kinoform,

wherein the lens is made from a moldable IR transmissive material, and

wherein the first aspherical surface with the superimposed kinoform is defined by:

$$Z(Y) = \frac{CY^2}{1+\sqrt{1-C^2(k+1)Y^2}} + DY^4 + EY^6 + FY^8 + GY^{10} + \frac{(\lambda L_i - (H_2Y^2 + H_4Y^4 + H_6Y^6 + H_8Y^8 + H_{10}Y^{10}))}{(N_\lambda - 1)}$$

~~where C = 1/R, R= radius of curvature, k = conic coefficient, D, E, F, and G are aspheric coefficients, λ = a wavelength of interest, L_i = 1, 2, 3, 4,..., i, N. = diffractive index for λ, and H_2, H_4, H_6, H_8, and H_{10} are coefficients of the kinoform, Y = a radial coordinate of the one surface~~.

14. (Original) The IR lens of claim 13, wherein the moldable IR transmissive material is a chalcogenide glass.

15. (Currently Amended) An infrared imaging optical arrangement comprising:

a first lens; and

a second lens,

wherein at least the first lens is made from a moldable infrared (IR) transmissive material and wherein at least the first lens has a kinoform superimposed on an aspheric surface on one of a first surface or a second surface, and

wherein the first lens with the kinoform superimposed on the aspherical surface is defined by:

$$Z(Y) = \frac{CY^2}{1+\sqrt{1-C^2(k+1)Y^2}} + DY^4 + EY^6 + FY^8 + GY^{10} + \frac{(\lambda L_i - (H_2Y^2 + H_4Y^4 + H_6Y^6 + H_8Y^8 + H_{10}Y^{10}))}{(N_\lambda - 1)}$$

~~where C = 1/R, R= radius of curvature, k = conic coefficient, D, E, F, and G are aspheric coefficients, λ = a wavelength of interest, L_i = 1, 2, 3, 4,..., i, N = diffractive index for λ, and H_2, H_4, H_6, H_8, and H_{10} are coefficients of the kinoform, Y = a radial coordinate of the one surface~~.

16. (Canceled)

17. (Previously Presented) The infrared imaging optical arrangement of claim 15, wherein the moldable IR transmissive material is a chalcogenide glass.

18. (Previously Presented) The infrared imaging optical arrangement of claim 15, wherein the moldable IR transmissive material is an arsenic selenide glass.

19. (Previously Presented) The infrared imaging optical arrangement of claim 13, wherein the moldable IR transmissive material is an arsenic selenide glass.